

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/002045

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7). G02B-6/293, H04J-14/02 and G02B-5/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(7). G02B-6/293, H04J-14/02, G02B-5/30, G02F-1/00, G02B-5/20 AND G02B-5/06

US classification: 398/079, 398/086, 385/all, 455/all, 398/082 and 350/all

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

Delphion Espacenet Japanese Patent Database Science Direct database Optics Express

Optics Infobase US West Database

search terms: multiplex\*, demultiplex\*, WDM, passive, adjacent, contacting, substrate, differ\*, multiple, plurality, optic\*, layer\*, laminar\*, coating, film, stratif\*, stack, index, refractive, wavelength, frequency, light, selective, prism, dispersive, wavelength dividing

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No(s).
X	US 2001/0012149 A1 (LIN ET AL.) 9 August 2001 (09-08-2001) abstract; figures 6a, 7c, 8a, 10b, 13, 15a and 16a; pg. 3, para. 0059 and 0060; pg. 4, para. 0074; pg. 5, para. 0081 and 0082; pg. 6, para. 0090, 0092, 0098 and 0099; pg. 7, para. 0101 and 0104; pg. 8, para. 0117, 0118, 0123; and pgs. 8 and 9, para. 126.	1 to 5, 7 to 9, 11 to 14, 17, 18, 28 and 29
Y		15, 21, 26 and 27

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

\* Special categories of cited documents :  
 "A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
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 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international search  
14 March 2005 (14-03-2005)

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No(s).
X	EP 1 363 145 A2 (KITAKA ET AL.) 19 November 2003 (19-11-2003) abstract; figures 4, 15 to 18; pg. 2, col. 1, para. 0003; pg. 3, col. 3, paras. 0016 and 0018; pgs. 3 and 4, cols. 4 and 5, para. 0026; pg. 6, col. 9, para. 0041; pg. 8, col. 13, para. 0068; pgs. 8 and 9, cols. 14 and 15, para. 0075 and 0079; and pg. 9, col. 16, para. 0083 and 0084; and claims 1, 7 to 9 and 12	1, 3 to 12, 19, 20, 22 to 25 and 29
Y		15, 21, 26 and 27
Y	US 5 526 449 (MEADE ET AL.) 11 June 1996 (11-06-1996) abstract; figures 8a, 8b and 10	15
X	Optics Letters, Volume 21, Issue 21, pgs. 1771 - 1773 (LIN ET AL.) November 1996 "Highly dispersive photonic band-gap prism" figures 1 and 2; pg. 1771, col. 1, para. 1, and pg. 1773, col. 1, para. 2 to col. 2, para. 1	1 to 5, 11, 12, 16, 19, 20, 22, 24, 28 and 29
A	US 6 188 819 B1 (KOSAKA ET AL.) 13 February 2001 (13-02-2001) abstract; figures 1, 2, 3 and 10; claims 1, 2, 3 and 7 to 14; col. 2, lines 1 to 15 and lines 29 to 46; col. 3, line 44 to col. 4, line 26; and col. 5, lines 35 to 45.	1 to 12, 15, 17 to 26, 28 and 29
A	EP 1 008 877 A2 (FU ET AL.) 14 September 2000 (14-06-2000) abstract; figures 1, 2, 5 and 7	19, 20, 22 to 25
X, E	US 6 825 982 B1 (TING) 30 November 2004 (30-11-2004) abstract; figures 1, 5, 9 and 10; claims 1, 2, 3, 7, 9, 11, 12 and 20; col. 8, line 53 to col. 10, line 7.	1 to 5, 7 to 9, 11, 12, 17, 18, 28 and 29
A		24

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Information on patent family members

International application No.  
PCT/CA2004/002045

Patent Document cited in Search Report	Publication Date	Patent Family Members(s)	Publication Date
US 2001/0012149 A1	09-08-2001	none	
EP 1 363 145 A2	19-11-2003	US20040008437 A1 JP2003329823A2 EP1363145 A3 CN1459649 A CA2428973 AA	15-01-2004 19-11-2003 04-02-2004 12-03-2003 17-11-2003
US 5 526 449	11-06-1996	WO9416345 A1 JP08505707 T2 EP0678196 B1 EP0678196 A1 DE69430361 C0 CA2153485 AA	21-07-1994 18-06-1996 10-04-2002 25-10-1995 16-05-2002 21-07-1994
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EP 1 008 877 A2	14-06-2000	EP1008877 A3 CA2288474 AA	02-01-2004 07-06-2000
US 6 825 982 B1	30-11-2004	none	